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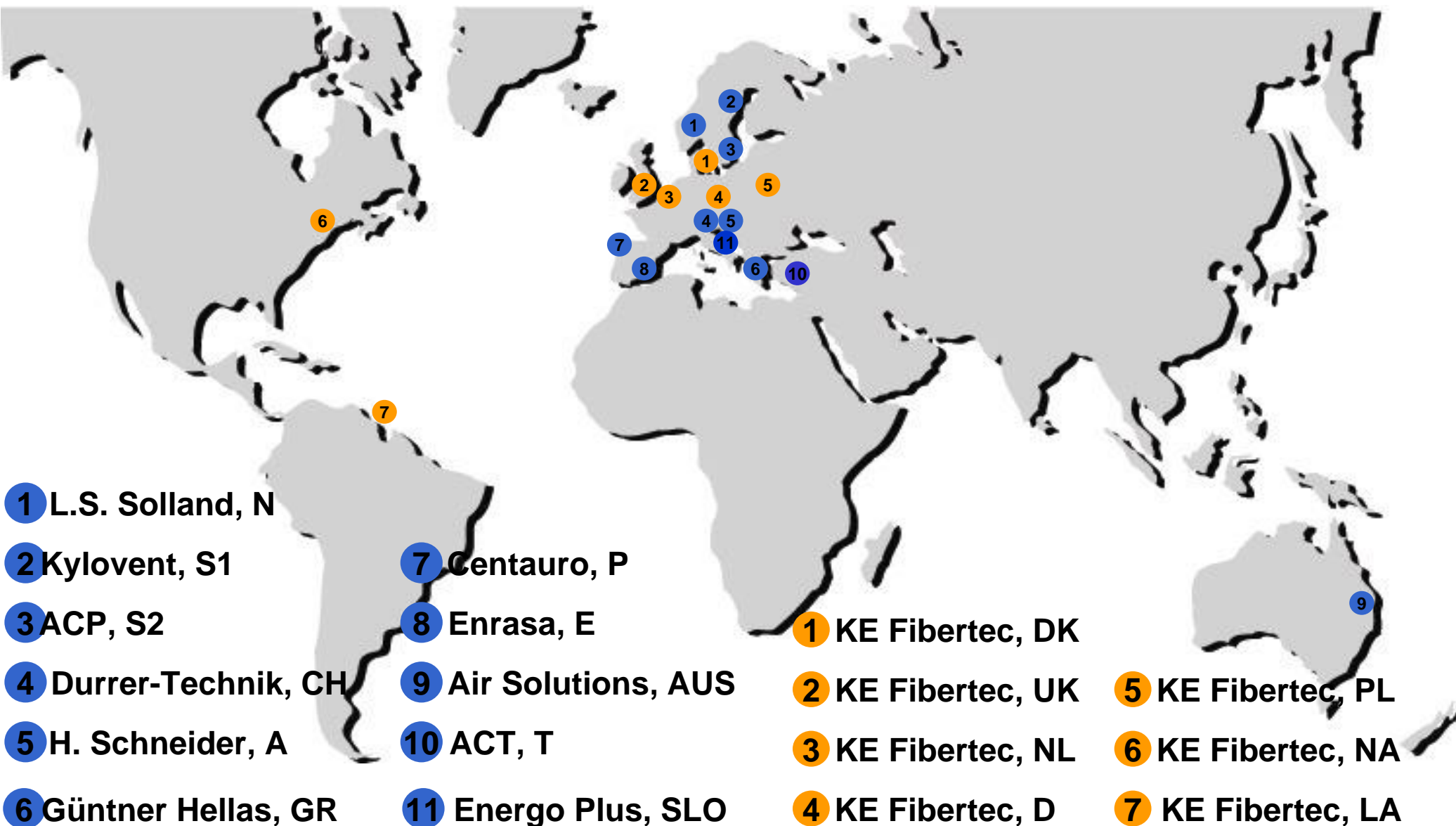


KE Fibertec AS, Industrivej Vest, DK





KE Fibertec AS World Wide



Textile based ventilation



KE-Low Impulse System is an ideal solution when high demands are made on hygiene, comfort and temperature control.



Why use KE Fibertec?

Solutions for people and products!

We do not sell industrial textiles by "the foot",

BUT

Solutions based on the knowledge of air!

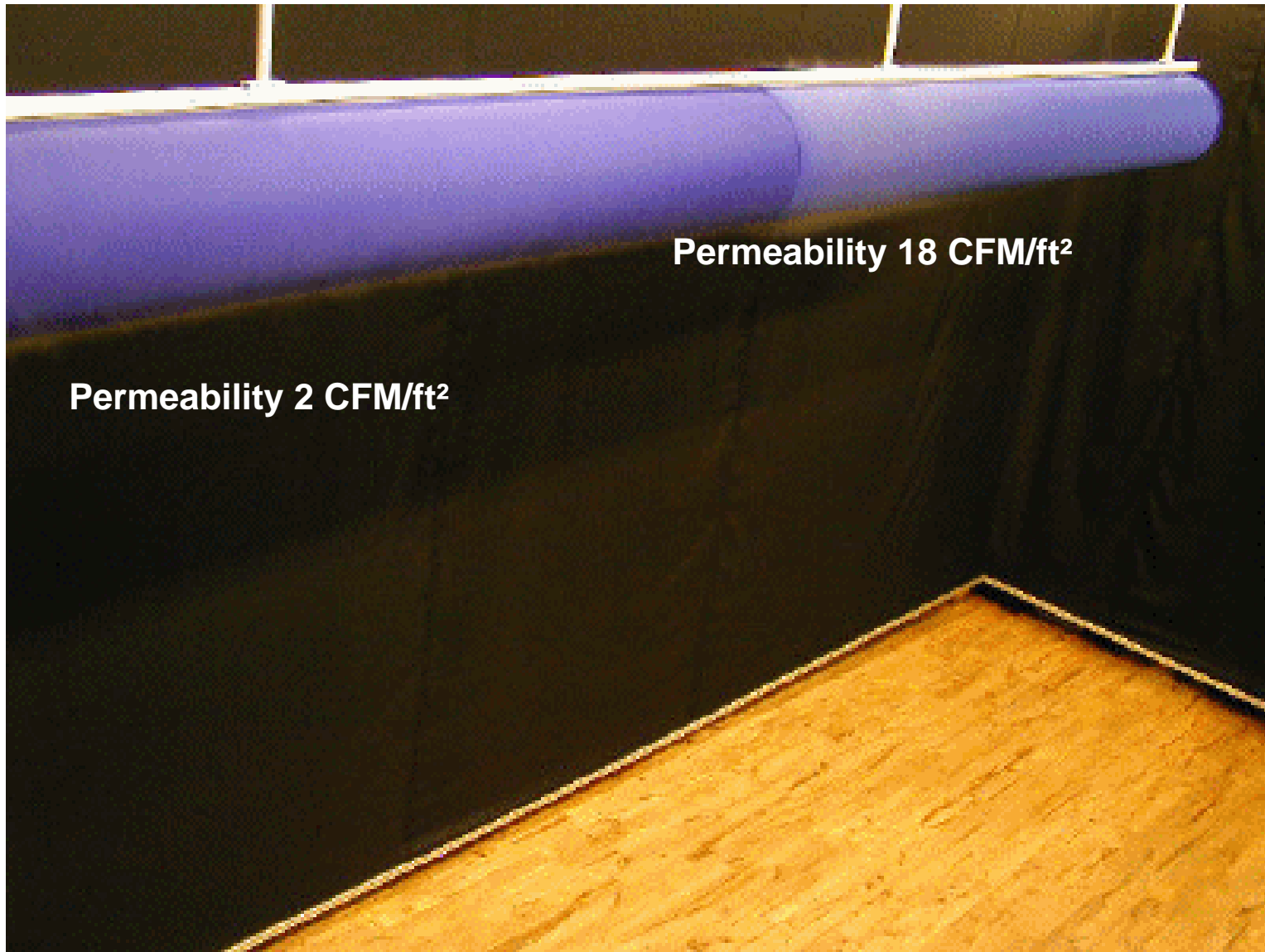
Why use KE textile systems?



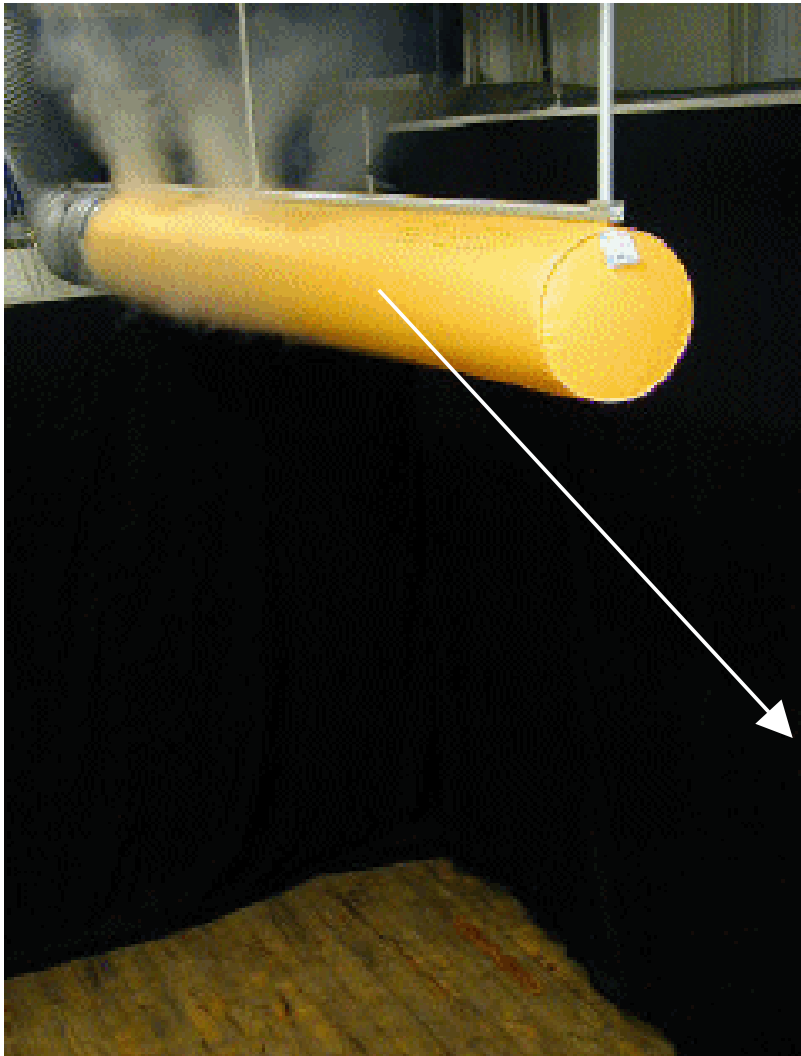
- ★ Uniform and correct air distribution (no dead zones)
- ★ Draft-free air distribution.
- ★ No condensation problems, no insulation needed.
- ★ Easy and inexpensive installation.
- ★ Low weight.
- ★ Specially developed alu-rail (Safetrack).
- ★ No growth of microorganisms.
- ★ Silent (soft material, no sharp edges)



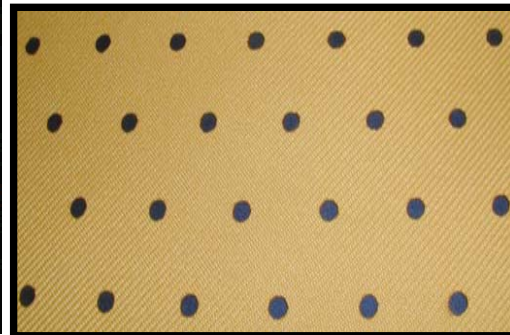
KE-Low Impulse® System



Active displacement with Laser holes

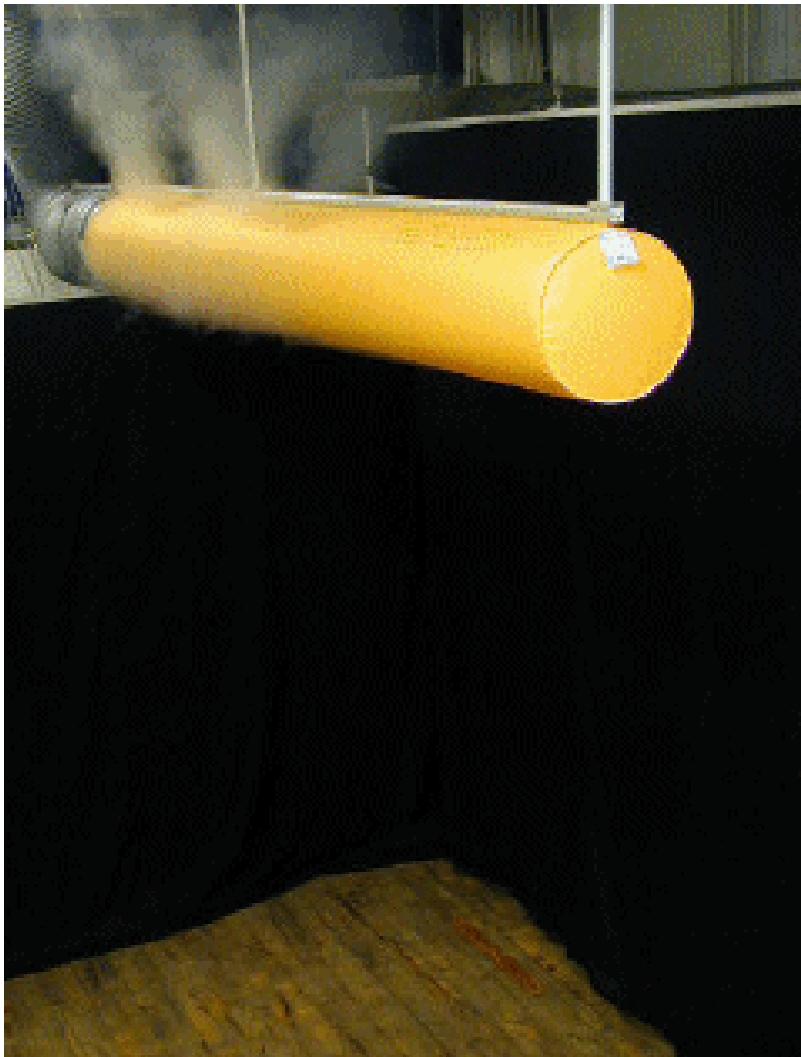


- ★ Laser technology with built-in advantages!
- ★ No draughts under textile duct at $\Delta T > 5^\circ\text{K}$.
- ★ Allows for heating during winter
- ★ Longer washing intervals (less blocking)

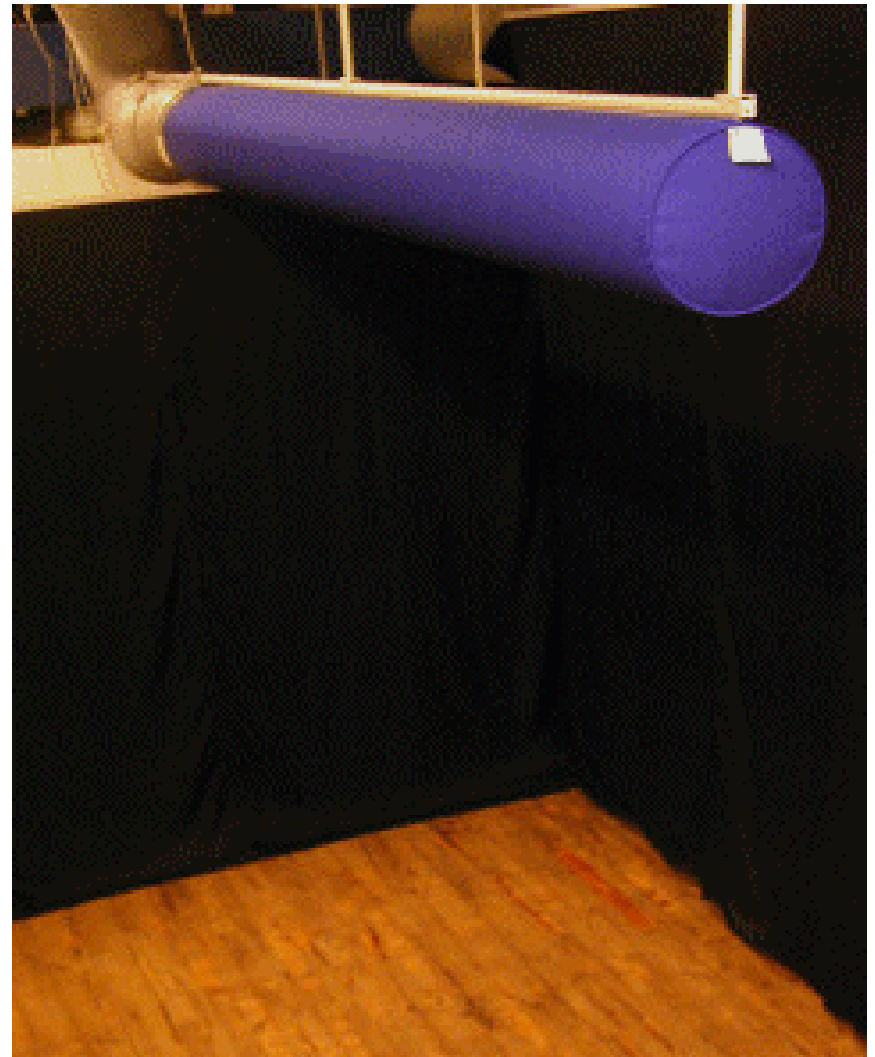




Basis for test: Delta T (cooling) = 10.8°F



Laser- Inject!



Low Impulse!



NAVSEA

- In 2000 KE Fibertec was contacted by NAVSEA in Philadelphia.
- NAVSEA wanted our help developing an air distribution concept based on textile for US Navy surface ships.



Project goals

- Create a flexible, lightweight and fire resistant system that would replace heavy sheet metal/grills and diffusers on the ships
- The system should achieve good air distribution and comfort within the compartments of the ships, and be easy to install and maintain



Solution

- Flame retardent material: Nomex
- Zippered sections in different sizes and lengths
- Both round and D-shaped ducts
- Option of air through fabric only or through vents (lasercut holes in the fabric)



Result

- Performance Specification MIL-PRF-32107
- General Specification for Air Duct Hose
- Approved for use by all Departments and Agencies of the Department of Defense



Resource/Energy savings

- Resource comparisons show 70% to 80% savings on weight.
- Energy savings through lower system operating pressure.



First Test

KE Fibertec first equipped the LHD4 type ship USS Boxer as a test project.

The work was carried out in Bremerton, WA, by Puget Sound Naval Shipyard, and with succes.





DDG Destroyer under construction by Nortrop Grumman in Pascagoula, Mississippi



DDG Destroyer under construction by Nortrop Grumman in Pascagoula, Mississippi

References: Aircraft Carriers



USS Enterprise (CVN-65)

USS John F. Kennedy (CV-67)

USS Dwight D. Eisenhower (CVN-69)

USS Theodore Roosevelt (CVN-71)

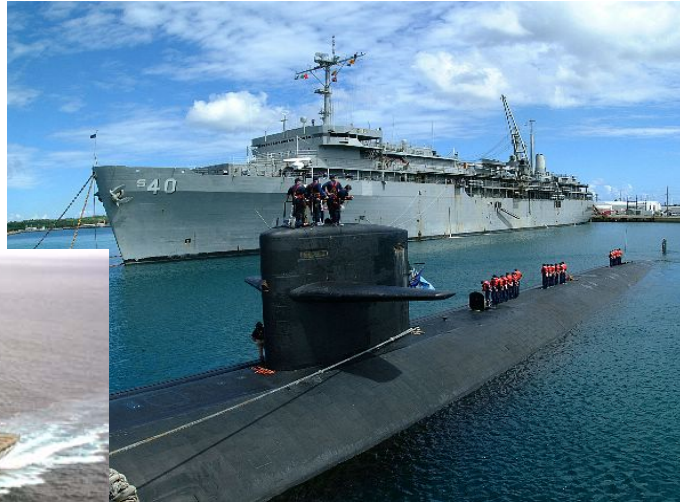
USS Abraham Lincoln (CVN-72)

USS George Washington (CVN-73)

USS John C Stennis (CVN-74)

USS Harry S. Truman (CVN-75)

References: Various Ships



USS McCampbell (DDG-85)

USS Mason (DDG-87)

USS Preble (DDG-88)

USS Camden (AOE-2)

USS Rainier (AOE-7)

USS Frank Cable (AS-40)



Other Materials Other Projects



**UL
approved**

- ★ Own weaving mill - KE Fibertec Vaeveri AS
- ★ 7 different Permeabilities
- ★ Permeability-stabilized material Trevira CS Polyester
Dyed and pre-heated yarns
Heat-treatment after weaving process.
- ★ Fire approved (B1-DIN 4102 – Germany)
UL-USA (underwriters Laboratories Inc.)
- ★ 7 colors in stock
 - ★ Basic colors: Ultramarine Blue, Std. White, Light Grey
 - ★ Standard colors: Melon Yellow, Traffic Red, Light Blue, Black
- ★ 5 years warranty on permeability, sewing and shrinkage



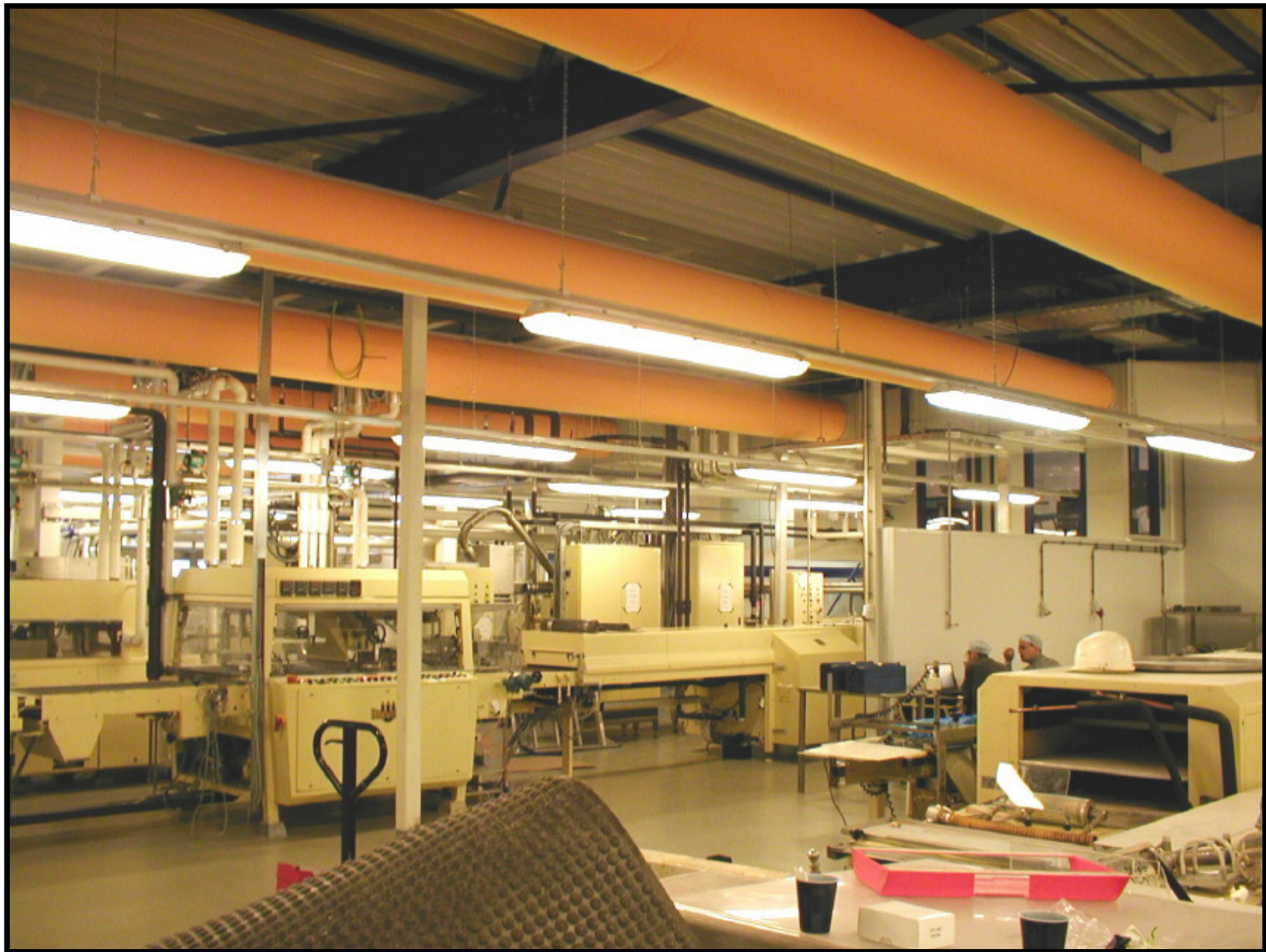
Distributor: KE Fibertec UK - Oakland Foods, GB



Distributor: KE Fibertec AS – Large-scale Kitchen



KE FIBERTEC





Distributor: KE Fibertec AS – Arla-Foods, Denmark (storage facility)



KE FIBERTEC





Distributor: KE Fibertec LA – Wendy's - Aruba



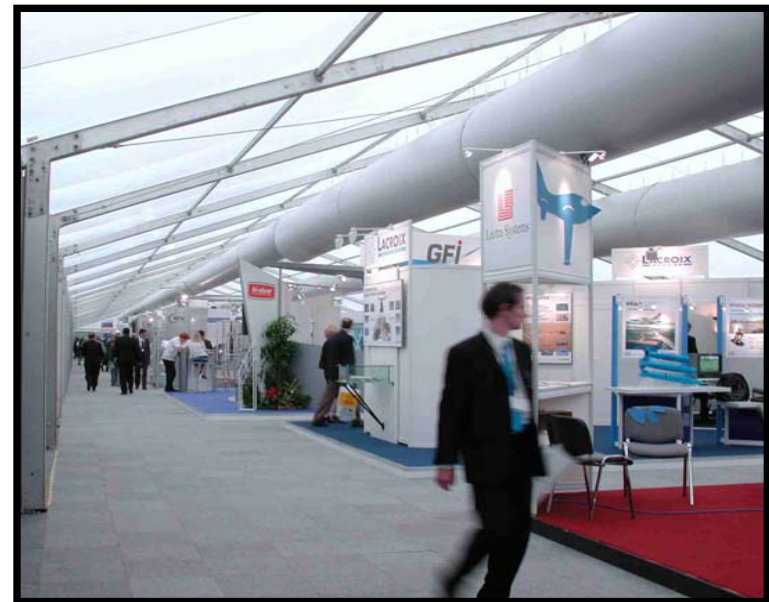
KE-Interior® System







Distributor: KE Fibertec AS – Hotel Marienlysk, DK



Distributor: KE Fibertec UK, RAF Show, UK (tents)



Distributor: KE Fibertec UK Farnborough Air Show 2002 Temporary, Building



Distributor: KE Fibertec UK, Farnborough Air Show 2002

KE-DireJet® System

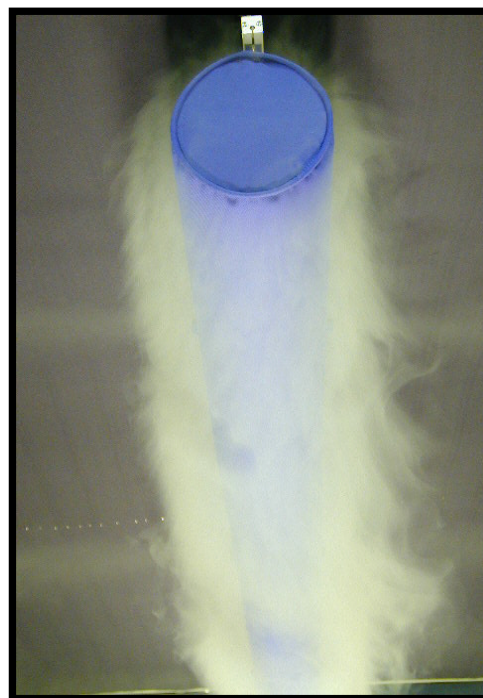
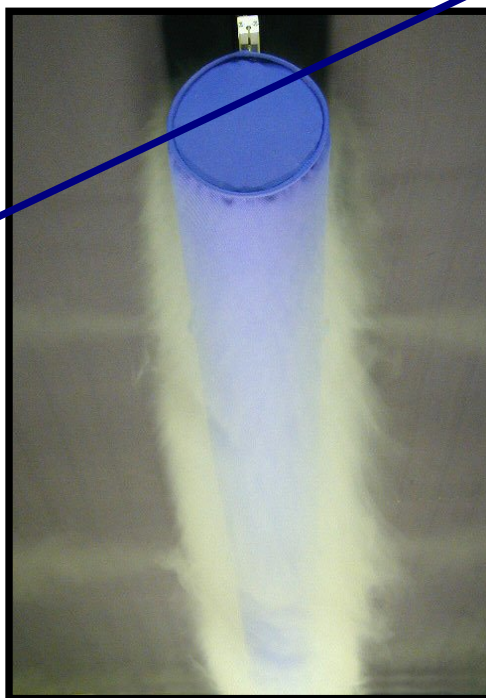
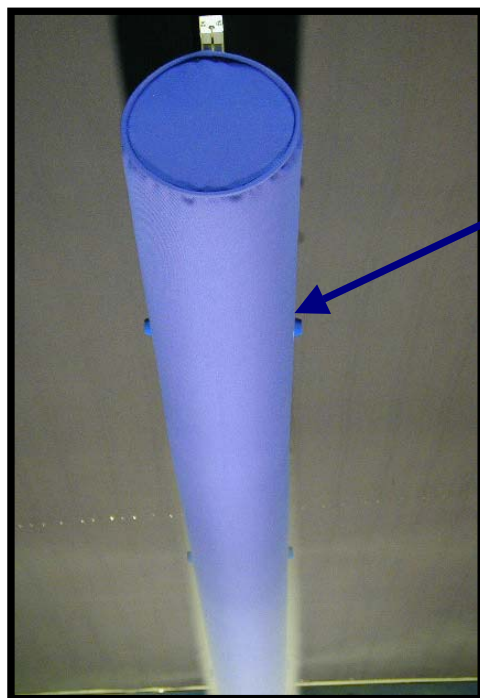


The KE-DireJet® System is the flexible solution for almost every air distribution application. The distribution and number of 18 mm conical nozzles follow below patterns:

- Diffuse delivery (Model A)
- Combination delivery (Model B)
- Directional delivery (Model C)



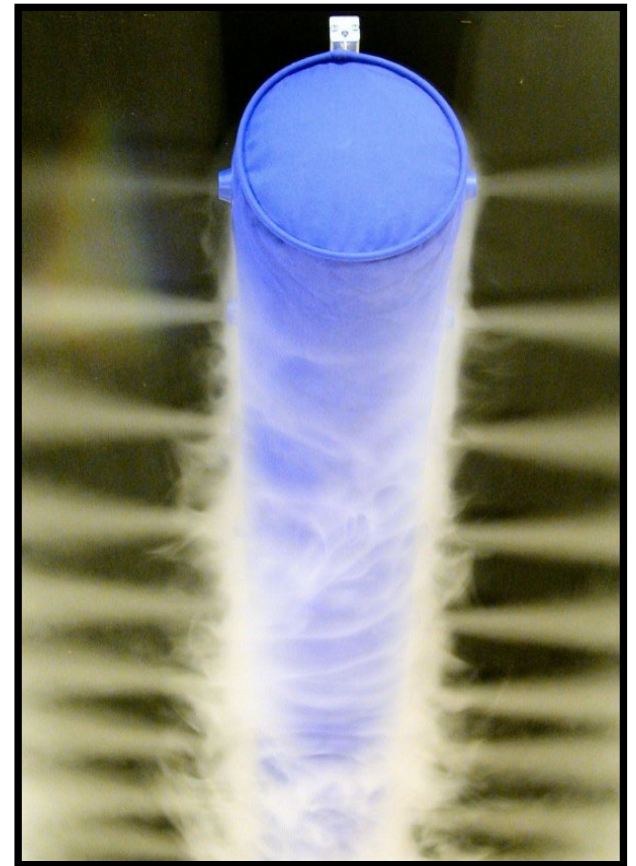
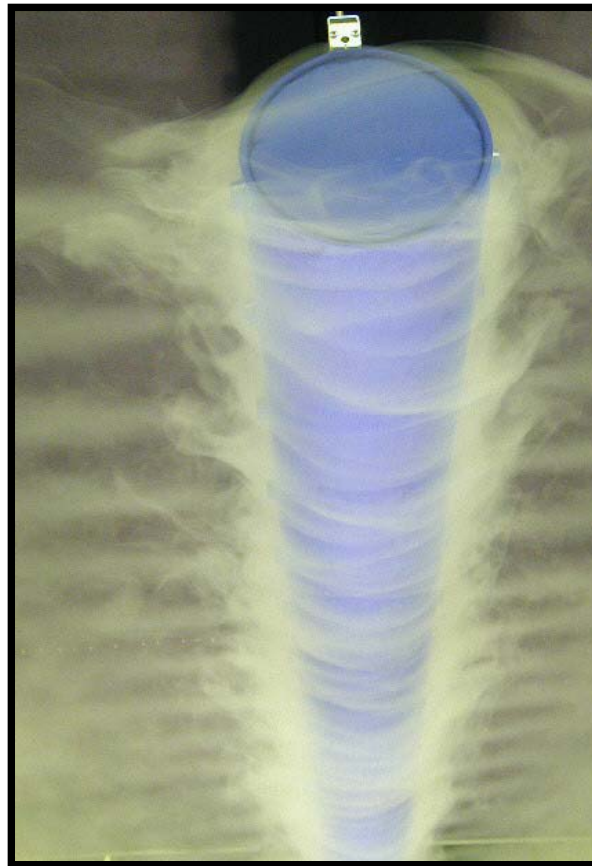
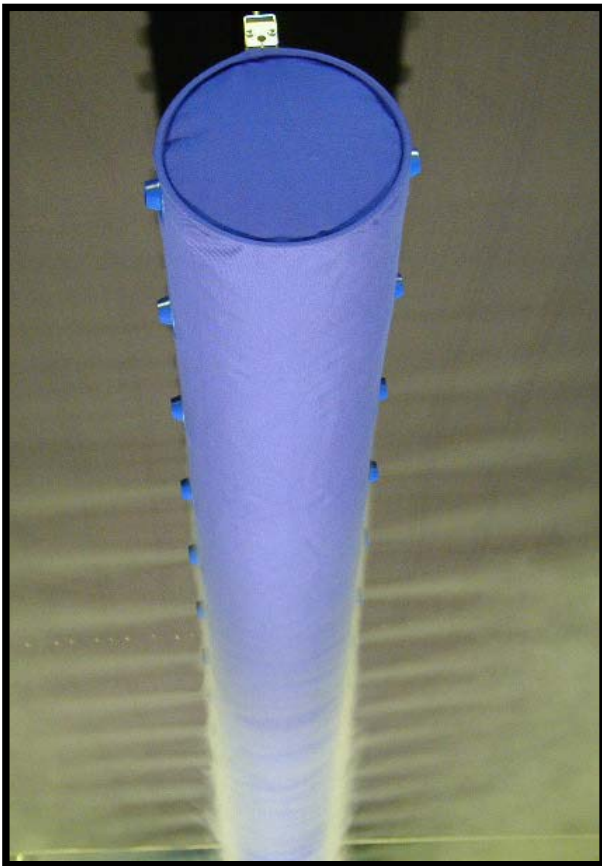
KE-DireJet® System Modell A



Active displacement - the nozzles make the difference



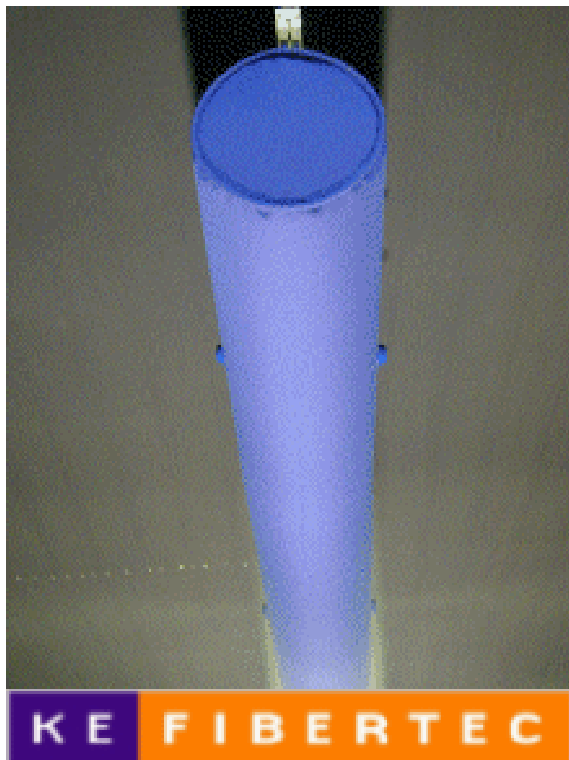
KE-DireJet® System - Modell B



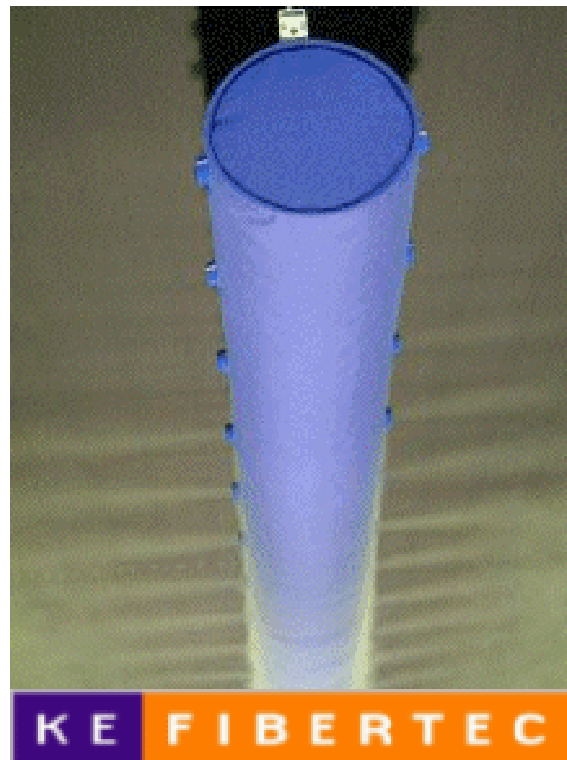
DireJet B combines the advantages of the diffuse and the mixing ventilation



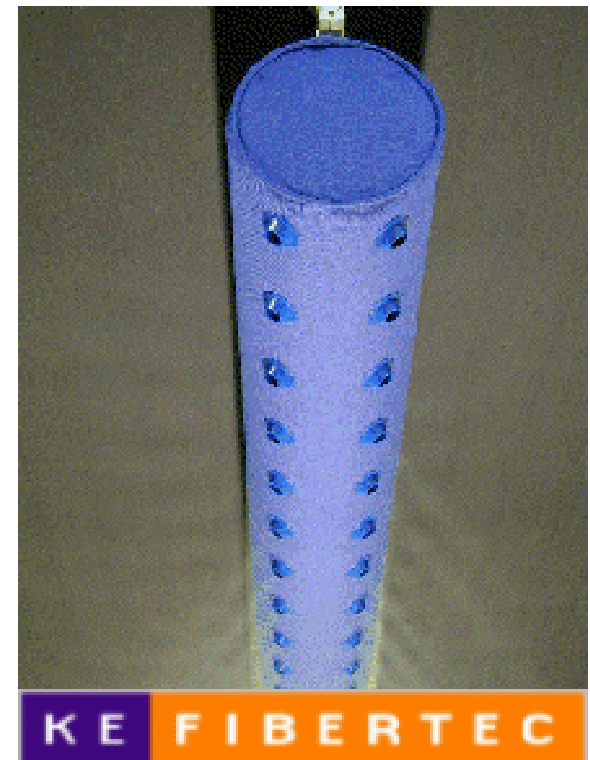
**KE-DireJet®
System Model A**



**KE-DireJet®
System Model B**



**KE-DireJet®
System Model C**





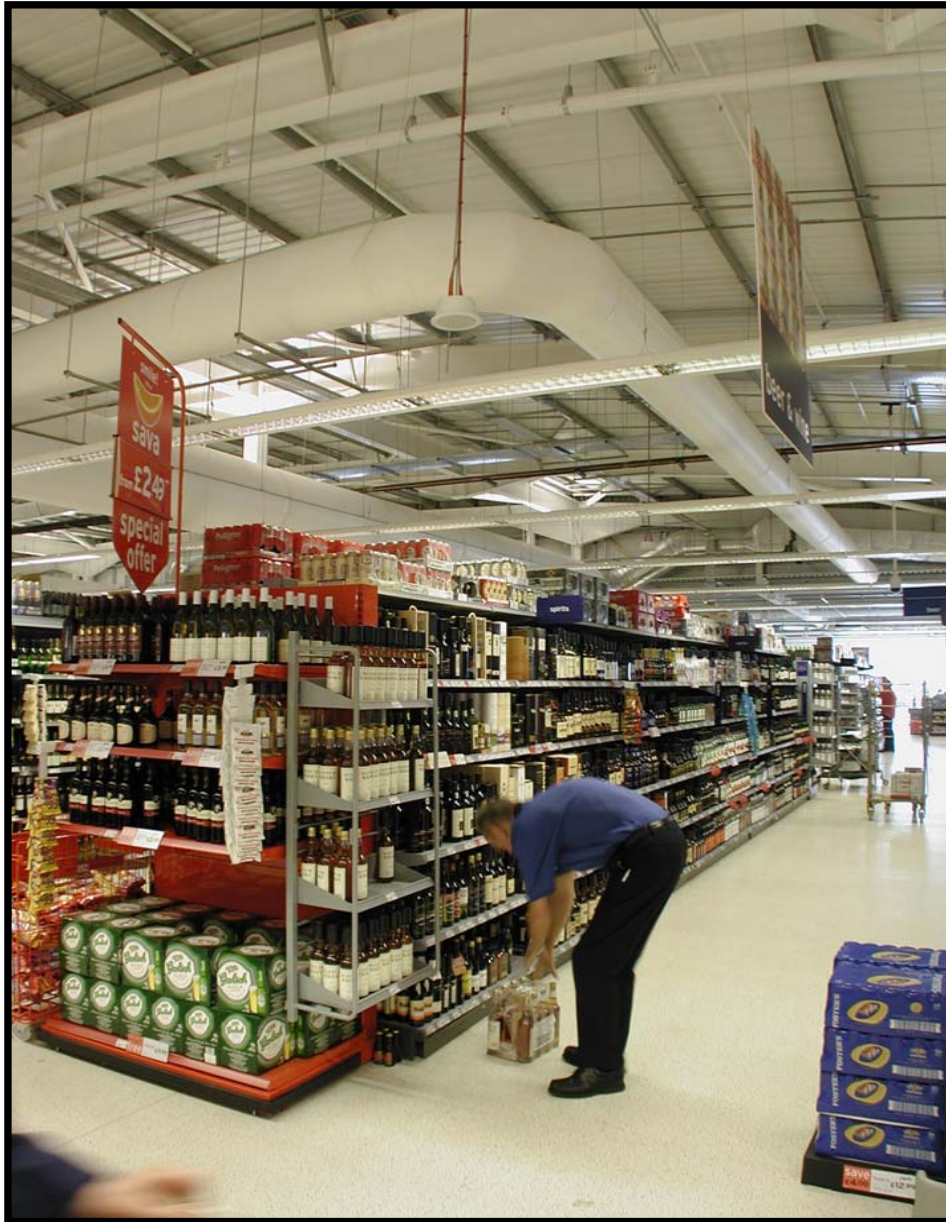


KE-DireJet® System

B E R T E C



Distributor: KE Fibertec LA, Boulevard Supermarket, Jamaica



Distributor: KE Fibertec UK- Sainsbury Supermarket



Distributor: KE Fibertec NA, Johnson Controls, KC USA





Distributor: KE Fibertec NA, USA Work stations, Conference room & Cafeteria



Distributor: KYL och Ventilation, S Atrium, Frontec Aurorum



Distributor: KE Fibertec UK Gatwick Worthe Hotel



Distributor: KE Fibertec Benelux Thialf Overzicht Ice Rink Holland



Distributor: KE Fibertec UK - Explosions Museum ~ Priddy's Hard, Gosport



KE-Low Impulse® System



Distributor: KE Fibertec UK, Pfizer UK